



Fakulti Seni Gunaan dan Kreatif

# **DESIGNING MELAKA TRAVEL GUIDE MOBILE APPLICATION TO ENHANCE TOURIST MOBILITY**

**KOK CHIA LI**

**Degree of Bachelor of Applied Arts with Honours  
(Design Technology)  
2017**

**UNIVERSITI MALAYSIA SARAWAK**

Grade: \_\_\_\_\_

**Please Tick (✓)**

Final Year Project Report

Masters

Phd

✓

**DECLARATION OF ORIGINAL WORK**

This declaration is made on the ..... day of ..... 2017.

**Student's Declaration :**

I **KOK CHIA LI (47206)** from **FACULTY OF APPLIED AND CREATIVE ARTS** hereby declare that the work entitled, **DESIGNING MELAKA TRAVEL GUIDE MOBILE APPLICATION TO ENHANCE TOURIST MOBILITY** is my original work. I have not copied from any other students' work or from any other sources except where due reference or acknowledgement is made explicitly in the text, nor has any part been written for me by another person.

\_\_\_\_\_  
Date Submitted

\_\_\_\_\_  
Kok Chia Li (47206)

**Supervisor's Declaration:**

I, DR.SALMIAH ABDUL HAMID, hereby certify that the work entitled, DESIGNING MELAKA TRAVEL GUIDE MOBILE APPLICATION TO ENHANCE TOURIST MOBILITY was prepared by the above named student, and was submitted to the "FACULTY" as a partial/full fulfillment for the conferment of BACHELOR OF APPLIED ARTS WITH HONOURS (DESIGN TECHNOLOGY), and the aforementioned work, to the best of my knowledge, is the said student's work.

Received for examination by: \_\_\_\_\_

Date: \_\_\_\_\_

(Dr.Salmiah Abdul Hamid)

I declare this Project/Thesis is classified as (Please tick (✓)):

- ☐ **CONFIDENTIAL** (Contains confidential information under the Official secret Act 1972) \*
- ☐ **RESTRICTED** (Contains restricted information as specified by the organization where research was done) \*
- ☐ **OPEN ACCESS**

Validation of Project/Thesis

I therefore duly affirmed with free consent and willingness declared that this said Project/Thesis shall be placed officially in the Centre for Academic Information Services with the abide interest and rights as follows:

- This Project/Thesis is the sole legal property of Universiti Malaysia Sarawak (UNIMAS).
- The Centre for Academic Information Services has the lawful right to make copies for the purpose of academic and research only and not for other purpose.
- The Centre for Academic Information Services has the lawful right to digitize the content to for the Local Content Database.
- The Centre for Academic Information Services has the lawful right to make copies of the Project/Thesis for academic exchange between Higher Learning Institute.
- No dispute or any claim shall arise from the student himself/ herself neither third party on this Project/Thesis once it becomes sole property of UNIMAS.
- This Project/Thesis or any material, data and information related to it shall not be distributed, published or disclosed to any party by the student except with UNIMAS permission.

Student's signature: \_\_\_\_\_  
(Date: \_\_\_\_\_ )

Supervisor's signature: \_\_\_\_\_  
(Date: \_\_\_\_\_ )

Current Address:

No 1, Jalan Bayan 4, Taman Bukit Katil, 75450 Melaka.

NOTES: \*If the Project/Thesis is CONFIDENTIAL or RESTRICTED, please attach together as annexure a letter from the organization with the period and reasons of confidentiality and restriction.

[The instrument was duly prepared by The Centre for Academic Information Services]

The project entitled **‘Designing Melaka Travel Guide Mobile Application To Enhance Tourist Mobility’** was prepared by **Kok Chia Li** and submitted to the Faculty of Applied and Creative Arts in fulfillment of the requirements for a Bachelor of Applied Arts with Honours **(Design Technology)**.

Received for examination by :

---

(Dr. Salmiah Abdul Hamid)

Date :

---

## **ACKNOWLEDGEMENT**

This research has been successful conducted due to unlimited assistance by my supervisor, Dr. Salmiah Abdul Hamid. She has been given a lot of guidance and advice in the preparation and all relevant information about this research. In addition, I would like to express my thankfulness to other lecturers for helping me to complete my research.

I would also like to express my appreciation to all my dearest friends, who have contributed their valuable time to support and give me advices in making this research complete successfully. You all have helped and gave me supports, encouragement and motivation to manage the best in this research. So, it can be completed on time.

Finally, my deepest thanks to my family who have gave me moral support and financial help to finish my Final Year Project. A big thanks also goes to the public and anyone who had cooperated in preparing this research smoothly.

4.4.6	Data analysis of respondents finds it is easy to use towards Kancil Trip app	34
4.4.7	Data analysis of respondents easily remember How to use towards Kancil Trip app	35
4.4.8	Data analysis of respondents on cohesive in Look and feel towards Kancil Trip app	36
4.4.9	Data analysis of respondents on adequate information of places towards Kancil Trip app	37
4.4.10	Data analysis of respondents on clearly marked way-finding buttons towards Kancil Trip app	38
4.4.11	Data Analysis of respondents on augmented reality feature enhances travel experience towards Kancil Trip app	39
4.4.12	Data analysis of respondents on function is well-integrated towards Kancil Trip app	40
4.4.13	Data analysis of respondents on would use during travel in Melaka towards Kancil Trip app	41
4.4.14	Data analysis of respondents on satisfaction towards Kancil Trip app	42
4.5	Conclusion	43

## **CHAPTER 5: DISCUSSION/ CONCLUSION**

5.1	Introduction	44
5.2	Tagline	45
5.3	Target Audience	45

3.3.2	Interview	17
3.4	Data Collection	17
3.4.1	Primary Data	18
3.4.2	Secondary Data	18
3.5	Conclusion	18

## **CHAPTER 4: FINDING**

4.1	Introduction	19
4.2	Observation on Travel Guide Mobile Application	20
4.2.1	Malaysia Trip Planner	20
4.2.2	Malacca Travel Guide App (imelaka)	21
4.2.3	Singapore Travel Guide (Tourias)	22
4.2.4	Malacca Tourism Guide	23
4.2.5	Made in Melaka	24
4.2.6	Destination Melaka	25
4.3	Results from the interview	26
4.3.1	Planning and development of Melaka tourism	26
4.3.2	Tourist	28
4.4	Data analysis from questionnaires	29
4.4.1	Data analysis from gender	29
4.4.2	Data analysis from age	30
4.4.3	Data analysis from nationality	31
4.4.4	Data analysis from ethnicity	32
4.4.5	Data analysis from familiarity with using travel apps	33

## **CHAPTER 2: LITERATURE REVIEW**

2.1	Introduction	6
2.2	Mobile Application	7
2.3	Tourism and Mobile Technology	7
2.4	Factors that influence the tourist mobility	8
2.4.1	Location related information	8
2.4.2	Mobile application user interface usability	8
2.4.2.1	Layout	9
2.4.2.2	Content	9
2.4.2.3	Colours	10
2.5	Guidelines for Interface Design	11
2.5.1	Enable frequent users to shortcuts	11
2.5.2	Offer information feedback	11
2.5.3	Design dialogs to yield closure	12
2.5.4	Support internal locus of control	12
2.5.5	Design for enjoyment	12
2.6	Augmented Reality in Tourism	13
2.7	Conclusion	13

## **CHAPTER 3: RESEARCH METHODOLOGY**

3.1	Introduction	15
3.2	Research Design	16
3.3	Qualitative	16
3.3.1	Observation	16



## **TABLE OF CONTENTS**

<b>CONTENTS</b>	<b>PAGE</b>
<b>DECLARATION OF ORIGINAL WORK</b>	<b>i</b>
<b>AUTHENTICATION AND SUPERVISOR'S SIGNATURE</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT</b>	<b>iv</b>
<b>TABLE OF CONTENTS</b>	<b>v</b>
<b>LIST OF FIGURES &amp; APPENDICES</b>	<b>x</b>
<b>ABSTRACT</b>	<b>xii</b>
<b>ABSTRAK</b>	<b>xiii</b>
 <b>CHAPTER 1: INTRODUCTION</b>	
1.1 Introduction	1
1.2 Background Study	2
1.3 Problem Statement	3
1.4 Research Questions	4
1.5 Research Objectives	4
1.6 Scope of Study	4
1.7 Limitation	5
1.8 Conclusion	5

5.4	Unique Selling Point (USP)	45
5.5	Promotional Strategy	46
5.6	Recommendation of app design	46
	5.6.1 Software used for app prototype and AR	46
	5.6.2 Colours	47
	5.6.3 Typography	47
	5.6.4 Icons	48
5.7	Recommendation of logo design	48
	5.7.1 App Name	48
	5.7.2 Font Design	49
	5.7.3 Logo Design	50
5.8	Recommendation of interface design	51
5.9	Recommendation of augmented reality (AR)	52
5.10	Promotional Items	53
5.11	Conclusion	54
<b>REFERENCES</b>		<b>xiv</b>
<b>APPENDICES</b>		<b>xix</b>

## **LIST OF FIGURES**

	<b>PAGE</b>
Figure 4.1: Interfaces of Malaysia Trip Planner	20
Figure 4.2: Interfaces of Melaka Travel Guide, imelaka	21
Figure 4.3: Interfaces of Singapore Travel Guide, Tourias	22
Figure 4.4: Interfaces of Malacca Tourism Guide	23
Figure 4.5: Interfaces of Made In Melaka	24
Figure 4.6: Interfaces of Destination Melaka	25
Figure 4.7: Respondents by gender	29
Figure 4.8: Respondents by age	30
Figure 4.9: Respondents by nationality	31
Figure 4.10: Respondents by ethnicity	32
Figure 4.11: Respondents by familiarity with using travel apps	33
Figure 4.12: How easy to use Kancil Trip app	34
Figure 4.13: Easily remember how to use Kancil Trip app	35
Figure 4.14: Cohesive in look and feel of Kancil Trip app	36
Figure 4.15: Adequate information of places on Kancil Trip app	37
Figure 4.16: Clearly marked way-finding buttons on Kancil Trip app	38
Figure 4.17: Augmented reality feature on Kancil Trip app enhances travel experience	39
Figure 4.18: Function is well-integrated on Kancil Trip app	40
Figure 4.19: Would use Kancil Trip app during travel in Melaka	41
Figure 4.20: Respondents satisfaction toward Kancil Trip app	42

Figure 5.1: Icon designs on Kancil Trip app	48
Figure 5.2: Font designs of app's name, Kancil Trip	49
Figure 5.3: Final font design of app's name, Kancil Trip	49
Figure 5.4: Logo designs of Kancil Trip app	50
Figure 5.5: Final logo design of Kancil Trip app	50
Figure 5.6: Ideas development of interface design of Kancil Trip app	51
Figure 5.7: Final interface design of Kancil Trip app	51
Figure 5.8: Augmented reality's overlay (information of the place)	52
Figure 5.9: Augmented reality's overlay (icon of Melaka or Heritage building)	52
Figure 5.10: Front cover of 'Journey to Melaka with Kancil Trip' photo-book	53
Figure 5.11: Postcard	53
Figure 5.12: Poster designs	54

## **LIST OF APPENDICES**

Appendix 1: Display of Kancil Trip App during CIPTA 2017	<b>xxii</b>
Appendix 2: Display of Kancil trip App during INTEX 2017	<b>xxii</b>
Appendix 3: Showing judge the simulation video of Kancil Trip App during INTEX 2017	<b>xxiii</b>
Appendix 4: Introducing Kancil Trip App to visitor during Soft Launch of Borneo 744	<b>xxiii</b>
Appendix 5: Visit to Melaka Stamps Museum	<b>xxiv</b>
Appendix 6: Visit to Melaka Islamic Museum	<b>xxiv</b>
Appendix 7: Visit to Melaka Sultanate Palace Museum	<b>xxv</b>

## **ABSTRACT**

Smartphones and mobile technologies have changed the way people travel. This study explores the usability and user experience of Kancil Trip as a medium of travel guide for Melaka City, the UNESCO World Heritage Site. The results reveal that mobile apps can change the tourists' behaviour by adding special feature such as the Augmented Reality (AR). Even though AR is widely used in mobile travel guides, Kancil Trip integrated the characters that are common in the Melaka's culture. The implications of these findings are important in order to suggest the future potential for travel guides on mobile application in changing many aspects of the tourism industry.

## **ABSTRAK**

*Telefon pintar dan teknologi aplikasi mudah alih telah mengubah cara perjalanan seseorang. Tujuan penyelidikan projek ini adalah untuk mereka bentuk aplikasi mudah alih panduan perjalanan Melaka, 'UNESCO World Heritage Site'. Aplikasi Kancil Trip telah diuji dari aspek usability dan user experience dari kalangan pelancong dalam dan luar negara. Hasil kajian telah menunjukkan bahawa aspek unik pada aplikasi ini, Augmented Reality (AR) telah mengubah cara perjalanan pelancong. Walaupun AR meluas digunakan dalam aplikasi mudah alih tetapi Kancil Trip mempunyai karakteristik yang sinonim dengan budaya Melaka. Dalam aspek industri pelancongan, implikasi dari dapatan kajian adalah penting untuk mencadangkan potensi masa depan aplikasi mudah alih panduan perjalanan.*

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Introduction**

This chapter will discuss about the background of study, problem statement, research questions, research objective, significant of study, scope of study and limitation. Hence, it will show overall framework planning which will focus more on the purpose of the research before conducting the research.

## **1.2 Background Study**

Melaka is a small, friendly city with many eye-catching sights and rich history. There are many different form of monuments are found in the city depicting the European, Islamic, Chinese and Indian architectural forms. All this historical building provides rich culture heritage experience to the visitors. On 15<sup>th</sup> April 1989, Melaka was declared as a ‘historical city’ while on 7<sup>th</sup> July 2008 as UNESCO World Heritage Site. These title have attracts more local and foreign visitors to come to Melaka. According to UNESCO (2008), Melaka has 500 years of history in trading and cultural exchanges between East and West on the Straits of Melaka. The building and cultural have been influenced by Asia and Europe that created a multicultural heritage city. Melaka demonstrates the early history during 15<sup>th</sup> century Malay Sultanate, while Portuguese and Dutch period on the beginning of 16<sup>th</sup> century. Melaka has western architecture and diverse mix of cultures in East and Southeast.

To diversify Melaka’s tourism products and to attract more visitors, a systematic promotional campaign is needed to turn Melaka into a top Malaysia and world visit destinations. From using slogans and themes such as history, culture, recreation, sport, shopping, convention, health tourism, education tourism, agro-tourism, eating out, “Melaka My Second Home” and youth tourism.

Hence, travel guide mobile application has become an important application for tourists and travellers. Nowadays, they use smartphones to check information for their holiday. Planning a holiday is not easy if they are lacking of information. One needs to do a lot of research on their destination of visits before planning their trip. Therefore, Melaka Travel Guide mobile application is proposed to ease the travellers before and during their visit to Melaka. This application can let user to plan their



holiday in Melaka within a few fingertips. Other than that, users can get information about tourist attraction location and gather the information of the places according to their interest.

Furthermore, the use of mobile application which consists of maps, information guides and photos are suggested to ensure the successful operation of a heritage state. This introduction of Melaka mobile application can allow visitors to understand the destination more clearly and have a memorable trip. In 2012, there are twenty-five million tourist visited Melaka, and it is expected to increase to thirty-six million tourist by the end of year 2020 (Valderrama, 2014).

### **1.3 Problem Statement**

Most of the time, tourists will come to Melaka for a vacation or food hunt. There could be tourists within Malaysia or other country. One of the problems that faced by tourists is they do not know where to find out updated and trusted information about the places of attraction, accommodation, transportation and dining. Tourists often find anybody randomly around them to ask the way of getting to a place. Even though they can find the information they needed in the internet, but the source might not updated or reliable. For example, changing of an address or phone numbers.

Furthermore, Melaka is rich with historical backgrounds. The tourists might want to know the background of the historical buildings. According to Johari (2010), tourists could not find information about the tombstone with Dutch and Portuguese inscriptions laid against the wall of church and why there is no roof over the church. Hence, they may miss out the background of the buildings and give a bad impression

about Melaka. Then, by developing the mobile application, it will help the tourists to find the information of the buildings and ways of getting there.

#### **1.4 Research Questions**

1. What kinds of content seek by tourists when using travel guide mobile application?
2. Are current travel guide mobile applications attract tourists in terms of interface design and functions?
3. How to enhance tourist's mobility during their visit to Melaka?

#### **1.5 Research Objectives**

1. To identify the content seek by tourist on a travel guide mobile application.
2. To analyse interface design and functions on current travel guide mobile applications.
3. To propose a Melaka travel guide mobile application with augmented reality.

#### **1.6 Scope of Study**

The scope of this research is to develop a Melaka travel guide application. Nowadays, mobile phone is commonly used by people. The target users for this application are tourists especially the youngsters that come to visit Melaka and Melaka Tourism Promotion Division. Thus, the scope of this study will be conducted in Melaka, focusing on central city. This application will provide details about tourist attractions around Melaka.

## **1.7 Limitation**

This research is conducted by analysing the interface design and functions of travel guide mobile application. There are a lot of travel guide mobile applications on the market. These current apps have provided great and useful feature to the users. Furthermore, this research is conducted in the central city of Melaka. The researcher needs to travel from Sarawak to Melaka to conduct this research. This is because researcher is studying at Sarawak.

## **1.8 Conclusion**

To conclude, Melaka is a small, friendly city with many eye-catching sights and rich history. The tourism developments in Melaka are increasing. Hence, travel guide mobile application has become an important tool for tourists. Besides, tourists are lack of information of places in Melaka. It makes them hard to move around Melaka. The primary aim of this research is to design a Melaka travel guide mobile application with augmented reality to enhance tourist mobility. In addition, to analyse interface design and functions on travel guide mobile application. This is to give a better travel experience to the tourists.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter specifies literature review. Literature review includes study and research on journals, thesis and online library. The purpose of literature review is to identify the variables that are related to the problems. The variables are mobile application, tourism and mobile technology, factors that influence the tourist mobility, guidelines for interface design and augmented reality in tourism.

## **2.2 Mobile Application**

According to Prensky (2004), there are about 1.5 million mobile phones around the world. The amount of mobile phone users are relatively more than personal computer users. Nowadays, mobile phone provides alike function like personal computer which makes more people choose to use mobile phone. Thus, mobile phone is an alternative to a personal computer to people that prefer mobility or on budget. Unlike previous days, mobile application only used for basic functions such as making and answering phone calls, setting alarm or take pictures. Besides, the Mobile Marketing Association Group (2008) said that mobile application is a largely growing market and it is served by increasing mobile application developers, publishers and providers. New research has also suggested that within this coming two years, global market for mobile applications will increase tremendously. Furthermore, mobile application can be easily downloaded via any mobile application stores (Song, Kim, Jones, Baker, & Chin, 2014). Besides, on the mobile application stores, there are many types of application that are classified into different function like education, entertainment and communication (Silva & Rocha, 2012).

## **2.3 Tourism and Mobile Technology**

Tourism is an activity that generates a country's economy and gives pleasure to the tourists as well. The theory of "mobile tourism" has widely emerged in tourist where they access through mobile devices (Brown & Chalmers, 2003). Cheverest, Daries, Mitchell and Efstratiou (2000) stated mobile tourist guide gives tourist a wonderful travel experience by incorporating features like maps and location-based

services. Hence, tourism has a great potential in the usage of mobile technology as almost everyone has a mobile phone. Mobile phone is widely used by people. Therefore, when mobile phone devices become more advanced, tourism applications will provide more advanced feature to the users. Hence, as more people are using mobile phones and applications act as a purchasing channel, it gives opportunity to tourism organization to adopt mobile tourism services (Tan & Ooi, 2013).

## **2.4 Factors that influence the tourist mobility**

### **2.4.1 Location related information**

Most of problems faced by the tourists when visit to an unfamiliar place are they do not know what or where to go. According to Virrantaus et al. (2001), location based services are information services accessible with mobile devices thorough the mobile network and utilizing the ability to make use of the location of the mobile device. Thus, location based services show interest places surrounding the user and provides detailed information background of the places to the tourists. This is very useful to the tourists because they only recognize on what they look for. According to Paelke et al. (2012), content of location based services is significant like tourism attraction places, where content production can be apportioned on a large number of users.

### **2.4.2 Mobile application user interface usability**

Deloitte (2012) reported that to develop a mobile application can spend up to millions of dollars. However, lack of usability is the causes that influence

user's choice to reject mobile applications (Deloitte 2012; Forrester Research 2011; Youens 2011). Many mobile applications do not look into the importance of aspects in application and lack of user friendly content. Besides, Forrester Research (2011) stated firms always copy the content of web based applications onto mobile application. Thus, this creates problems to the mobile device because the application interface is fully loaded with information, pictures and text (Adipat et al., 2011). Hence, users may feel frustrated and may not use the application because the application does not emphasize on the keyword of usability.

#### **2.4.2.1 Layout**

Layout is very important on mobile application. The layouts need to be simple, clear and direct indication on the mobile interface in order to capture user interest. Most tourist guide information read from right to left and view into content. Therefore, it is vital to follow a certain pattern layout designs that are internationally recognisable.

#### **2.4.2.2 Content**

Information displayed on the mobile screen need to be very direct and summarised. Vandevelda and Van Dierdonck (2003) said that if the contents are too messy, it will be hard to presents the information of a platform. However, if the contents are well-planned, this problem can be solved. Besides, a bad user interface could confuse users from different background

(Marcus & Gould, 2000). Furthermore, images and videos are useful to implement along with the texts. These give users a better understanding.

#### **2.4.2.3 Colours**

Colours play an important role in designing a mobile application user interface. Colours need to be addressed to give appealing interest to users. Warm colours can be used for advancing elements while cool colours for receding element. According to Lee, Choi et al. (2008), ten different cultural backgrounds were affected by the user from which country and what devices they are using. For example, green colour widely uses for health based application but it may offended people from France as it associated with criminality.